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## AMENDMENTS TO THE CLAIMS

1. (Currently amended) A composition capable of inducing apoptosis or necrosis in cancer cells, comprising:
- a ~~dithiocarbonyl~~ dithiocarbamate compound;
  - a metal cation selected from the group consisting of  $Zn^{++}$  and  $Cu^{++}$ ;
  - a modulator of cellular glutathione effective to decrease cellular glutathione levels; and
  - ~~an inhibitor of the phosphorylation of choline~~ dimethylethanolamine.
2. (Currently amended) The composition of claim 1, wherein the ~~dithiocarbonyl~~ dithiocarbamate compound has the formula:
- $(R_1)_m(R_2)Z-C-S-S-Y, (R_1)(R_2)N-C(=S)-S-Y,$   
 wherein m is 0 or 1,  
 wherein Z is O or N, but if Z is O, then m is 0; and  
 wherein  $R_1$  and  $R_2$  may be independently selected from the group consisting of hydrogen, or C1-C24 straight, branched, or cyclic alkyl, alkenyl, aryl, acyl, alkaryl, aralkyl, ~~or~~ and alkoxy groups, said groups optionally substituted with ester, ether, halogen, sulfate, hydroxy, or phosphate groups, and wherein  $R_1$  and  $R_2$  may be optionally connected via a bridge comprising  $-(CH_2)_n-$ , wherein n is 3-8, and wherein said bridge may be optionally substituted independently on any of the carbon atoms with C1-C10 straight, branched, or cyclic alkyl, aryl, aryalkyl, or alkaryl groups, each of said groups optionally substituted with hydroxy, halo, phosphate, sulfate, or sulfonate groups; and  
 wherein Y is chosen from the group consisting of hydrogen, a pharmaceutically acceptable cation, a physiologically cleavable leaving group, a targeting moiety, ~~or~~ and a chemotherapeutic drug.
3. (Currently amended) The composition of claim ~~2~~ 1, wherein the ~~dithiocarbonyl~~ dithiocarbamate compound is selected from the group consisting of: diethyldithiocarbamate (DEDIC); ~~tricyclo [5.2.1.0<sup>2,6</sup>] decyl-9[8]-xanthogenate (D609);~~

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tetraethylthiuram disulfide (~~Disulfuram, ((C<sub>2</sub>H<sub>5</sub>)<sub>2</sub>NCS<sub>2</sub>)<sub>2</sub>); and  
pyrrolidinedithiocarbamate (~~PDC~~).~~

4. (Currently amended) The composition of claim ~~3~~ 1, wherein the ~~dithiocarbonyl~~  
dithiocarbamate is PDC pyrrolidinedithiocarbamate.
5. (Cancelled)
6. (Original) The composition of claim 1, wherein the metal cation is Zn<sup>2+</sup>.
7. (Original) The composition of claim 1, wherein the modulator of cellular glutathione is  
selected from the group consisting of ethacrynic acid, L-buthionine-S,R-sulfoximine,  
diethylmaleate, 2-cyclohexene-1-one, and 1-chloro-2,4-dinitrobenzene.
8. (Original) The composition of claim 1, wherein the modulator of cellular glutathione is  
ethacrynic acid.
9. (Cancelled)
10. (Currently amended) The composition of claim 1, wherein the ~~dithiocarbonyl~~  
dithiocarbamate compound is ~~PDC pyrrolidinedithiocarbamate~~ in a concentration range  
of about 5-200 μM, wherein the metal cation is Zn<sup>2+</sup> in a concentration range of about 20-  
500 μM, wherein the modulator of cellular glutathione ~~levels~~ is ethacrynic acid in a  
concentration range of about 10-300 μM, and wherein ~~the inhibitor of the~~  
phosphorylation of choline is dimethylethanolamine is in a concentration range of about  
3-40 mM.
11. - 30. (Cancelled)
31. (New) A composition capable of inducing apoptosis or necrosis in cancer cells,  
comprising:  
a biologically effective amount of a dithiocarbamate compound; and  
a biologically effective amount of a modulator of cellular glutathione effective to  
decrease cellular glutathione levels.

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32. (New) The composition of claim 31, wherein the dithiocarbamate compound is pyrrolidinedithiocarbamate.
33. (New) The composition of claim 31, wherein the modulator of cellular glutathione is selected from the group consisting of ethacrynic acid, L-buthionine-S,R-sulfoximine, diethylmaleate, 2-cyclohexene-1-one, and 1-chloro-2,4-dinitrobenzene.
34. (New) The composition of claim 31, wherein the modulator of cellular glutathione is ethacrynic acid.
35. (New) The composition of claim 31, wherein the dithiocarbamate compound is pyrrolidinedithiocarbamate, and the modulator of cellular glutathione is ethacrynic acid.
36. (New) The composition of claim 35, comprising about 10 to about 50  $\mu\text{M}$  pyrrolidinedithiocarbamate, and about 10 to about 50  $\mu\text{M}$  ethacrynic acid.
37. (New) The composition of claim 35, comprising about 20  $\mu\text{M}$  pyrrolidinedithiocarbamate, and about 10  $\mu\text{M}$  ethacrynic acid.
38. (New) The composition of claim 31, further comprising a biologically effective amount of dimethylethanolamine.
39. (New) A composition capable of inducing apoptosis or necrosis in cancer cells, comprising:
- a biologically effective amount of a dithiocarbamate compound;
  - a biologically effective amount of a modulator of cellular glutathione effective to decrease cellular glutathione levels; and
  - a biologically effective amount of a metal cation selected from the group consisting of  $\text{Zn}^{++}$  and  $\text{Cu}^{++}$ .
40. (New) The composition of claim 39, wherein the dithiocarbamate compound is pyrrolidinedithiocarbamate.

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41. (New) The composition of claim 39, wherein the modulator of cellular glutathione is selected from the group consisting of ethacrynic acid, L-buthionine-S,R-sulfoximine, diethylmaleate, 2-cyclohexene-1-one, and 1-chloro-2,4-dinitrobenzene.
42. (New) The composition of claim 39, wherein the modulator of cellular glutathione is ethacrynic acid.
43. (New) The composition of claim 39, wherein the metal cation is  $\text{Zn}^{++}$ .
44. (New) The composition of claim 39, comprising about 5 to about 50  $\mu\text{M}$  pyrrolidinedithiocarbamate, about 50 to about 200  $\mu\text{M}$   $\text{Zn}^{++}$ , and about 10 to about 100  $\mu\text{M}$  ethacrynic acid.
45. (New) The composition of claim 39, comprising about 10 to about 50  $\mu\text{M}$  pyrrolidinedithiocarbamate, about 30 to about 80  $\mu\text{M}$   $\text{Zn}^{++}$ , and about 30 to about 80  $\mu\text{M}$  ethacrynic acid.
46. (New) A composition capable of inducing apoptosis or necrosis in cancer cells, comprising:
- a biologically effective amount of a dithiocarbamate compound;
  - a biologically effective amount of a metal cation selected from the group consisting of  $\text{Zn}^{++}$  and  $\text{Cu}^{++}$ ; and
  - a biologically effective amount of dimethylethanolamine.
47. (New) The composition of claim 46, wherein the dithiocarbamate compound is pyrrolidinedithiocarbamate.
48. (New) The composition of claim 46, wherein the metal cation is  $\text{Zn}^{++}$ .
49. (New) A composition capable of inducing apoptosis or necrosis in cancer cells, comprising:
- tricyclo-[5.2.1.0<sup>2,6</sup>]-decyl-9[8]-xanthogenate; and

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a modulator of cellular glutathione effective to decrease cellular glutathione levels.

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50. (New) The composition of claim 49, wherein the modulator of cellular glutathione is selected from the group consisting of ethacrynic acid, L-buthionine-S,R-sulfoximine, diethylmaleate, 2-cyclohexene-1-one, and 1-chloro-2,4-dinitrobenzene.
51. (New) The composition of claim 49, wherein the modulator of cellular glutathione is ethacrynic acid.
52. (New) The composition of claim 49, further comprising dimethylethanolamine.
53. (New) The composition of claim 49, further comprising a metal cation selected from the group consisting of  $\text{Zn}^{++}$  and  $\text{Cu}^{++}$ .
54. (New) The composition of claim 53, wherein the metal cation is  $\text{Zn}^{++}$ .
55. (New) The composition of claim 49, wherein the modulator of cellular glutathione is ethacrynic acid, and wherein the composition further comprises dimethylethanolamine and  $\text{Zn}^{++}$ .
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